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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,633	11/21/2003	Tatsuya Ozaki	NS-US035121	9129

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EXAMINER

BROWN, DREW J

ART UNIT PAPER NUMBER

3616

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/717,633		OZAKI, TATSUYA	
	Examiner		Art Unit	
	Drew J. Brown		3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/25/04 (Preliminary amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,9,11,12,16-20 and 22 is/are rejected.
- 7) ☐ Claim(s) 2,3,5-8,10,13-15 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/25/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 15 is objected to because of the following informalities: In lines 2 and 3, "has" should be changed to --have--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 20 recites the limitation "the at least one passenger" in line 3. There is insufficient antecedent basis for this limitation in the claim.
5. With respect to claim 22, the "at least one of two different preset" renders the claim indefinite because it is unclear to the Examiner what the collision state is being identified as. The Examiner suggests changing "preset" to --preset collision conditions--.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 17 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Sala et al. (U.S. Pub. No. 2004/0102883 A1).

With respect to claim 17, Sala et al. discloses a collision sensing device configured and arranged to be installed on a front portion of a vehicle to produce a collision state signal indicative of a detected collision state of the vehicle (claim 1). A collision state identifying section is operatively coupled to the collision sensing device and configured to identify the detected collision state of the vehicle (claim 1). At least one passenger restraining device is configured and arranged to be selectively activated (claim 2), and a control unit (inherent) is configured and arranged to selectively activate the at least one passenger restraining device differently depending on the detected collision state identified by the collision state identifying section (Abstract).

With respect to claim 22, Sala et al. discloses a method sensing a collision state of a front portion of a vehicle, where a detected collision state signal is detected in response to the collision state that was sensed. The collision state of the vehicle is identified as at least one of two different preset collision conditions based on a detected collision state by the collision sensing device, where the at least one passenger restraining device is selectively activated differently depending on the collision state identified (Abstract).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 4, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (U.S. Pat. No. 3,859,482) in view of Sala et al. and Wheatley (U.S. Pat. No. 5,431,445).

Matsui et al. discloses a tension member (148) with a prescribed initial tensile force that extends in a width-wise direction of the front vehicle structural section (Figure 27, column 26, lines 57-67, and column 27, lines 1-8).

Matsui et al. does not disclose a front vehicle structural section having a predetermined collision collapsing characteristic, left and right tensile force sensors arranged on the front vehicle structural section to measure left and right tensile forces of the tension member, and a collision state identifying section configured to identify a collision state of the vehicle based on a comparison between the left and right tensile forces of the tension member measured by the left and right tensile force sensors.

Wheatley, however, discloses a front vehicle structural section having a predetermined collision collapsing characteristic (column 1, lines 10-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Matsui et al. in view of the teachings of Wheatley to include a predetermined collapsing characteristic in the front vehicle structural section in order to absorb some of the impact from the collision.

Although Matsui et al discloses a tension detection means (column 27, line 4), it is not shown in the drawings or explained in more detail. Sala et al., however, discloses left and right force sensors arranged on the front vehicle structural section to measure left and right forces, and a collision state identifying section configured to identify a collision state of the vehicle based on a comparison between the left and right forces measured by the left and right force sensors (claim 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Matsui et al. in view of the teachings of Sala et al. to have left and right force sensors that measure the left and right tensile forces in order to properly determine what type of accident the vehicle experiences (such as frontal, angular, or offset as disclosed in the Abstract), and then protect the occupant(s) appropriately according to the collision type. It would also have been obvious to include a collision state identifying section in order to have desired levels of airbag inflation according to specific collision modes (Abstract), which would allow the entire vehicle to have optimal protection during a variety of collisions.

With respect to claim 4, Matsui et al. discloses that the tension member includes a wire that extends in the widthwise direction of the vehicle with end portions fixedly coupled at lateral parts of the front vehicle structural section (Figure 27).

With respect to claim 9, Sala et al. discloses that the collision state identifying section is configured to determine a threshold value for activating at least one passenger restraining device in accordance with the collision state identified based on comparison between the left and right tensile forces of the tension member measured by the left and right tensile force sensors (claim 1, lines 23-33).

With respect to claim 11, Sala et al. discloses that the collision state identifying section determines an activation timing with which a passenger restraining device will be activated and a passenger restraining force based on an amount of decrease with respect to time in the left and right tensile forces of the tension member measured by the left and right tensile force sensors (paragraph 5).

With respect to claim 12, Wheatley discloses that the front vehicle structural section is configured to deform such that left and right lateral side portions collapse inward relative to the vehicle at side locations, respectively, that are in front of a respective one of the left and right tensile force sensors when subjected to a load oriented in the widthwise direction of the vehicle. Although Wheatley does not disclose the specific location side portions with respect to the sensors; however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to position them in front of the sensors, since it has been held that rearranging parts of an invention involves only routine skill in the art.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. in view of Sala et al.

Matsui et al. discloses a front vehicle structural supporting means for providing structural support to a front portion of a vehicle, a tension means (148) for prescribing an initial tensile force that extends in a width-wise direction of the front vehicle structural section (Figure 27, column 26, lines 57-67, and column 27, lines 1-8), and tensile force measuring means.

Matsui et al. does not disclose left and right tensile force sensors arranged on the front vehicle structural section to measure left and right tensile forces of the tension member, and a collision state identifying means for identifying a collision state of the vehicle based on a comparison between the left and right tensile forces of the tensioned means measured by the tensile force measuring means.

Although Matsui et al discloses a tension detection means (column 27, line 4), it is not shown in the drawings or explained in more detail. Sala et al., however, discloses left and right force sensors arranged on the front vehicle structural section to measure left and right forces, and a collision state identifying section configured to identify a collision state of the vehicle based on a comparison between the left and right forces measured by the left and right force sensors (claim 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Matsui et al. in view of the teachings of Sala et al. to have left and right force sensors that measure the left and right tensile forces in order to properly determine what type of accident the vehicle experiences (such as frontal, angular, or offset as disclosed in the Abstract), and then protect the occupant(s) appropriately according to the collision type. It would also have been obvious to include a collision state identifying section in order to have desired levels of airbag inflation according to specific collision modes (Abstract), which would allow the entire vehicle to have optimal protection during a variety of collisions.

11. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sala et al. in view of Matsui et al. and Wheatley.

With respect to claim 18, Wheatley discloses the claimed invention as discussed above, as well as left and right tensile force sensors that are arranged on the front vehicle structural section to measure left and right tensile forces of the tension member, and a collision state identifying section configured to identify the collision state of the vehicle based on a comparison between the left and right tensile forces of the tension member measured by the left and right tensile force sensors, but does not disclose a front vehicle structural section having a predetermined collision collapsing characteristic, or a tension member with a prescribed initial tensile force that extends in a width-wise direction of the front vehicle structural section

Wheatley, however, discloses a front vehicle structural section having a predetermined collision collapsing characteristic (column 1, lines 10-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Sala et al. in view of the teachings of

Wheatley to include a predetermined collapsing characteristic in the front vehicle structural section in order to absorb some of the impact from the collision.

Matsui et al. discloses a tension member (148) with a prescribed initial tensile force that extends in a width-wise direction of the front vehicle structural section (Figure 27, column 26, lines 57-67, and column 27, lines 1-8).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Sala et al. in view of the teachings of Matsui et al. to have a tension member extend in a width-wise direction of the front structural section so that every possible frontal collision can be accounted for when determining the actuation of the restraint device(s).

With respect to claim 19, the control unit is configured and arranged to set an activation timing of the at least one passenger restraining device differently depending on the detected collision state identified by the collision state identifying section (paragraph 5).

With respect to claim 20, the at least one passenger restraining device includes at least one airbag (Abstract, line 11), wherein the control unit is configured and arranged to inflate the at least one passenger restraining device differently depending on the detected collision state identified by the collision state identifying section (Abstract).

Allowable Subject Matter

12. Claims 2, 3, 5-8, 10, 13-15, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haglund, Yoshida et al., Blackburn et al., Sala et al., and Theisen disclose similar collision detecting devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Drew J. Brown
Examiner
Art Unit 3616

DJB
3/8/06



3/10/06

**PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
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